R E P O R T R E S U M E S

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AN EXPLORATORY STUDY IN TEACHING WORLD HISTORY IN GERMAN.
COMMON SCHOOL DIST. JOINT NO. 16, SUSSEX, WIS.
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DESCRIPTORS- *EXPERIMENTAL TEACHING, *GERMAN, *LANGUAGE RESEARCH, *SECONDARY SCHOOLS, *WORLD HISTORY, TEACHING TECHNIQUES, STATISTICAL DATA, SUSSEX, WISCONSIN, NDEA TITLE VI,

IN SUSSEX, WISCONSIN, AN EXPERIMENT INVOLVING THREE GROUPS, ONE EXPERIMENTAL AND TWO CONTROL, WAS UNDERTAKEN TO DETERMINE THE EXTENT TO WHICH THE COORDINATE STUDY OF GERMAN AND WORLD HISTORY CAN BE EFFECTIVE IN THE MORE RAPID MASTERY OF GERMAN. THE EXPERIMENTAL GROUP DEVOTED ONE HOUR TO THE EXPERIMENTAL WORLD HISTORY COURSE TAUGHT IN GERMAN AND ANOTHER HOUR TO THE REGULAR GERMAN II COURSE. THE FIRST CONTROL GROUP WAS ENROLLED IN SECOND YEAR GERMAN AND SERVED AS THE CONTROL IN LANGUAGE COMPETENCY AGAINST WHICH THE ACHIEVEMENT IN GERMAN OF THE EXPERIMENTAL GROUP WAS MEASURED. THE SECOND CONTROL GROUP PURSUED THE TRADITIONAL WORLD HISTORY COURSE AND SERVED AS THE CONTROL IN HISTORY. THE RESULTS SHOW THAT THE EXPERIMENTAL GROUP GAINED IN LANGUAGE COMPETENCY OVER THE FIRST CONTROL GROUP AND DID NOT MANIFEST ANY APPRECIABLE LOSS OF KNOWLEDGE OF HISTORICAL INFLUENCE IN RELATION TO THE SECOND CONTROL GROUP. INCLUDED ARE GRAPHS INDICATING THE COMPARATIVE ACHIEVEMENT OF THE THREE GROUPS AT DIFFERENT STAGES OF THE EXPERIMENT, TABLES OF CONCLUSIVE DATA, AND A SAMPLE OF CLASS REACTIONS TO THE EXPERIMENT. (AUTHOR)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ED013049

RESEARCH REPORT

AN EXPLORATORY STUDY IN TEACHING WORLD HISTORY IN GERMAN

(Proposal S-393 Contract No. OE-6-10-178)

Problem:

The main objective in the experiment was to find a suitable milieu in which the learner of German could reinforce and enhance his newly acquired language skills. A course in Contemporary World History was offered in German to students who had completed one year of the study of German taught by the audiolingual method.

Hypothesis:

The hypothesis then is established that under the conditions set forth below, group one will gain in language competency over group two and that group one will not manifest any appreciable loss of knowledge of historical facts or appreciation of historical influences in relation to group three.

Procedure:

Three groups of students were selected, one for experimental purposes and two for control purposes. An attempt was made in the selection process to match students in the three groups by the various factors of intelligence, grade-point average, motivation, general levels of school and community service, and teacher evaluations on past performance, in order to attain as much as possible the identical heterogeneous characteristics in each group. In this manner no one group was weighted toward support of the hypothesis underlying this experiment and a more positive scientific control was established.

Group I. The experimental group consisted of students who had not had world history but who had completed German I. This group, as has been noted above, was not a select group but rather included students with a normal range of abilities and achievements. They were given two hours of instruction daily -- one hour devoted to the regular German II course and the second hour devoted to the experimental world history course taught in German.

Group II. The first control group was composed of students who had completed both a traditional history course and German I, the first year of high-school German. They were enrolled in second-year German and served as the control in language competency against which the experimental group's achievement in German was measured.

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Group III. The second control group consisted of students not previously enrolled either in German or in history. They pursued the traditional world history course and served as the control in history against which the experimental group's achievement in history was measured.

All three groups were taught by Mr. Keitel, thus eliminating any variation in personality factors, teaching procedures, methodology, and also eliminating any variations which might later mar the experiment. Group one and group three had the same library projects and outside readings. This work was done primarily in English in order to prevent the experimental group from falling behind in subject matter mastery.

Following the selection procedure, an attempt was made to compare the similarities of the group. The following results are indicated.

A comparison of ability as measured by Verbal Converted Score on the School and College Ability Test.

Group	Mean	Standard Deviation
German Experiment	283.764	8.529
German Control	293.177	11.177
History Control	285.235	9.412
M.L.A. Coop Foreign Language Standardization Group		
Listening	296.---	13.---
Reading	294.---	13.---
Writing	296.---	13.---

The Verbal converted score of the School and College Ability Test was used because it was the measure of ability used with the standardization population of the M.L.A. Cooperative Foreign Language test which has been selected to measure progress in German. The results of this test indicated that the German Control group was very similar to the M.L.A. standardization group but considerably more talented than either the History control or the German Experimental group. The smaller standard deviation for the German Experimental group and for the History Control group indicated that these groups are more homogeneous than either the German Control or the M.L.A. Standardization group.

To substantiate or replicate these findings, it was decided to study the Henmon Nelson scores of the three groups:

A comparison of Ability as measured by IQ Scores of the Henmon Nelson Intelligence Test.

Group	Average IQ
German Experiment	118.411
German Control	115.176
History Control	115.875

This revealed that the German Experiment Group was more talented than either the German Control or the History Control. From the contradictory directions of these two sets of data -- it is assumed that the scores on the one test offset the scores on the other and that the groups are sufficiently similar to proceed with the experiment.

The hypothesis of the experiment will be satisfied if the German Experiment group learns more German without a significant loss in History learning. It was deemed advisable to take a mid year measurement in both of these areas.

The M.L.A. Cooperative Language Test was selected as the measurement of learning in German. The Reading, Listening and Writing tests were administered to both groups. The groups in turn were compared with each other and with a national sample by the Mean score for each group.

A comparison of German Language Achievement as measured by the M.L.A. Cooperative Foreign Language Tests.

	Mean Converted Score		
Group	Reading	Listening	Writing
German Experiment	149.948	154.794	159.735
German Control	147.265	150.654	156.676
M.L.A.Standardization	155.----	154.---	152.---

End of year score.

These scores revealed that at mid year the experimental group was doing as well or better than the control group in all areas measured. The mean of the standardization group was an end-of-year score. It should be noted that at mid year in listening and writing, the experimental group was doing as well or better than the National Standardization group at the year's end.

The question then remains, did this German progress by the experimental group result at the expense of progress in History. Progress in History was measured by cumulative scores earned on each of the three major teacher made tests. The same tests were administered in English to both the History experimental and History control group. Each test consisted of from 75 to 100 objective items.

A comparison of World History Achievement as measured by the sum total of scores on teacher made tests.

Group	Test I	Test II	Test III
German Experiment	1343	1478	1323
History Control	1363	1497	1367

These results indicate very slight differences in the direction of the History group. These differences amount to one to two points on a scale ranging from 0 to 100. It is assumed that these slight differences could have occurred by chance. It should be emphasized that all preliminary conclusions were based on observations. No test of statistical significance had been applied to any data collected.

END OF YEAR
RESULTS OF GERM. ET.

M = Mean Score of Group

σ = Standard Deviation

Σx^2 = Sum of Square of the deviation of individual scores from the group mean.

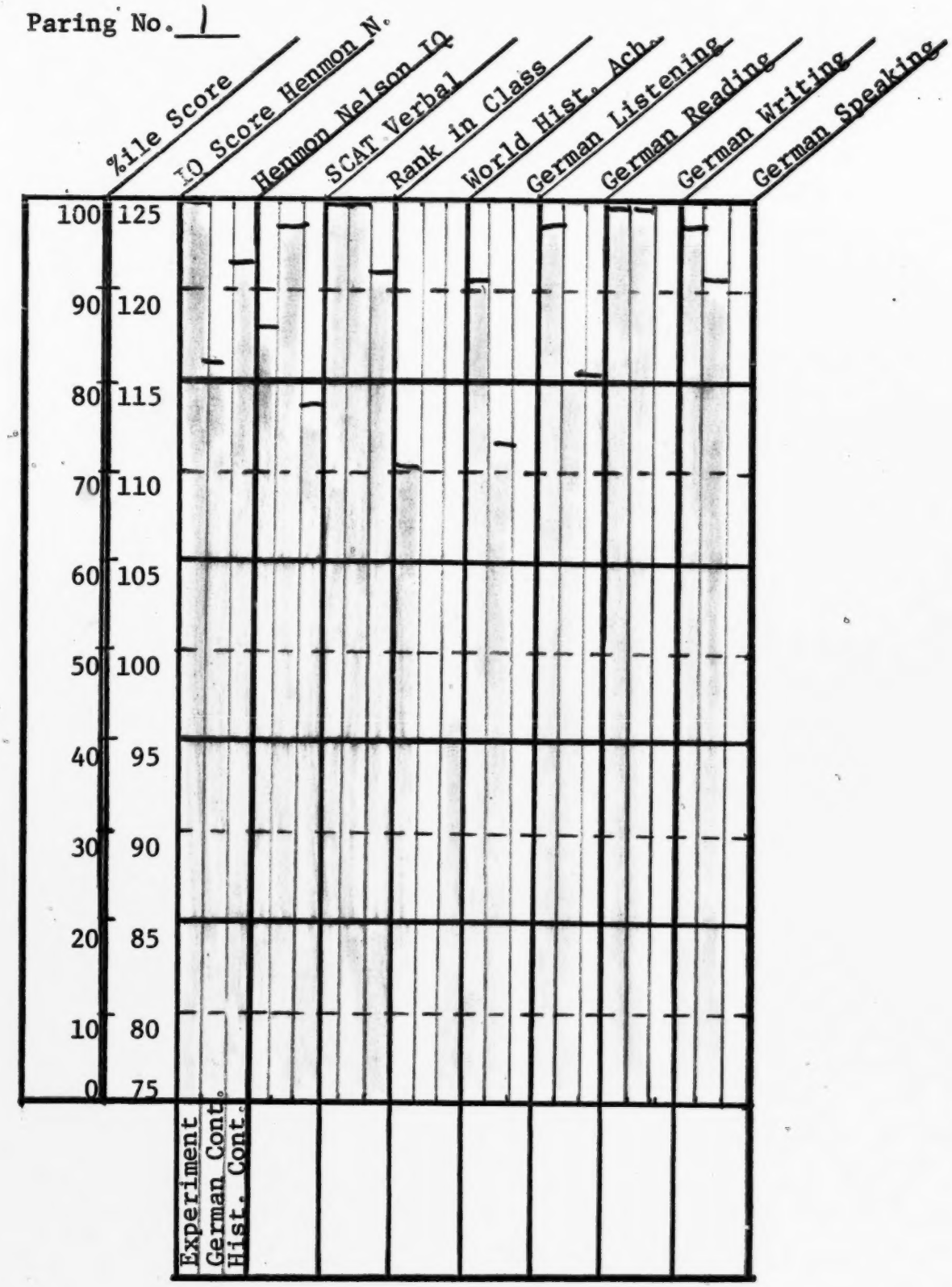
t = Fisher's test for level of significance of mean difference.

FORMULAS: $M = M' + i \times \Sigma f x^2$ $\sigma = i \sqrt{N \cdot f x^2 - (\Sigma f x)^2}$

Fisher's t $$t = \frac{M_1 - M_2}{\sqrt{\frac{\Sigma x_1^2 + \Sigma x_2^2}{N(N-1)}}}$$

	M	σ	Σx^2	t	Significant
SCAT Verb Ex.	284	7.937	1079	---	---
SCAT Verb Germ. Cont.	285	16.186	4440	.223	Not
SCAT Verb. Hist. Cont.	285	9.695	1604	.316	Not
World Hist. Exp. Group	488.4	46	36,050	.018	Not
World Hist. Cont.Group	488.7	38	24,897		
Germ. Exp. Writing	165	6.211	1028	3.565	.01 level
Germ. Cont. Writing	154	8.235	1568		
Germ. Exp. Reading	160.4	10.117	1960	3.186	.01 level
Germ. Cont. Reading	150.4	5.294	728		
Germ. Exp. Speaking	162.8	6.995	1057	3.515	.01 level
Germ. Cont. Speaking	153.2	4.338	1145		
Germ. Exp. Listening	159.0	8.941	1185	1.900	Not. Sig.
Germ. Cont. Listening	154.3	5.796	544		

A graphic comparison of matched pairs of students (German Experiment, History Control, and German Control) involving percentile scores on measures of ability and achievement.



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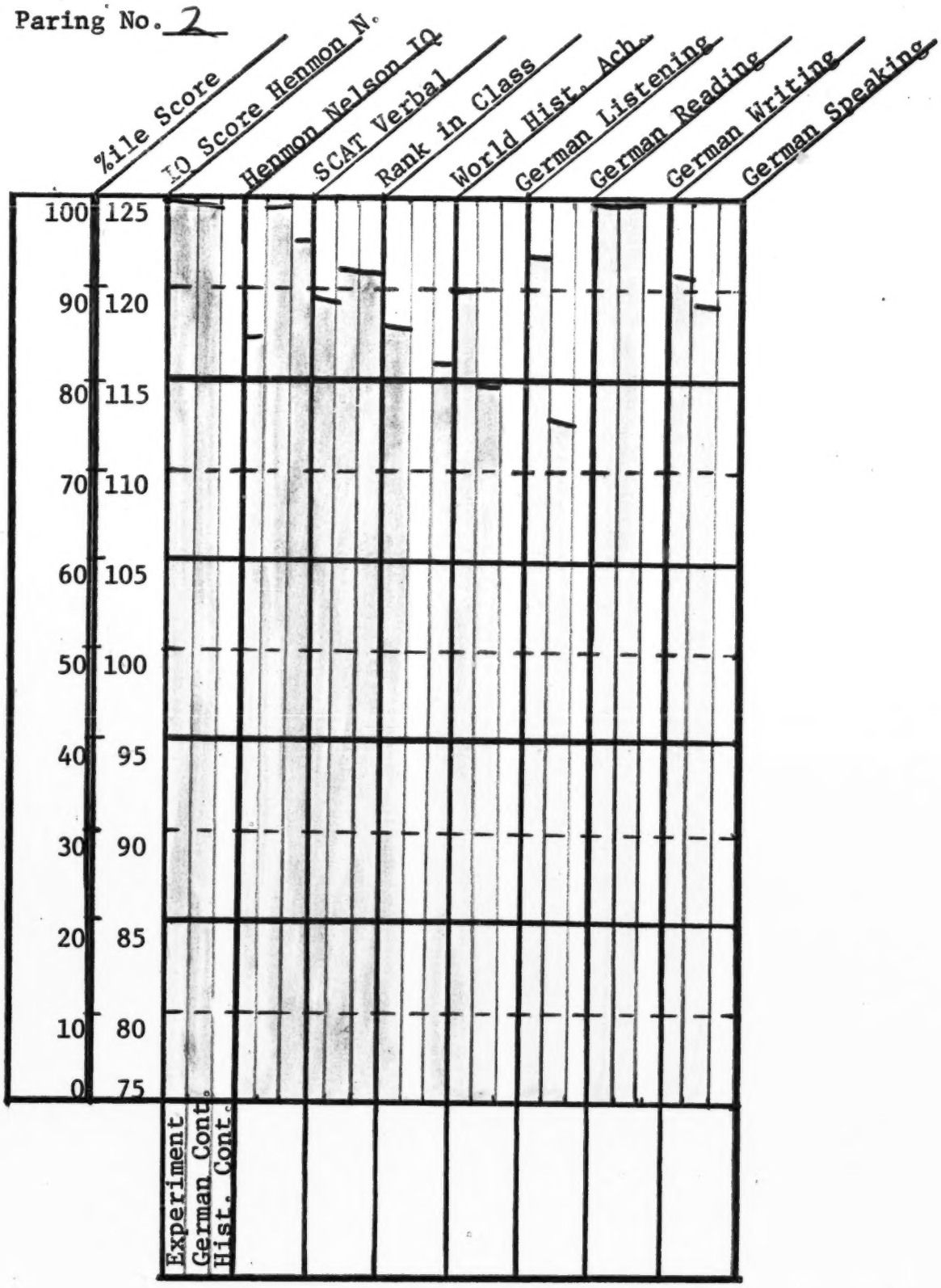

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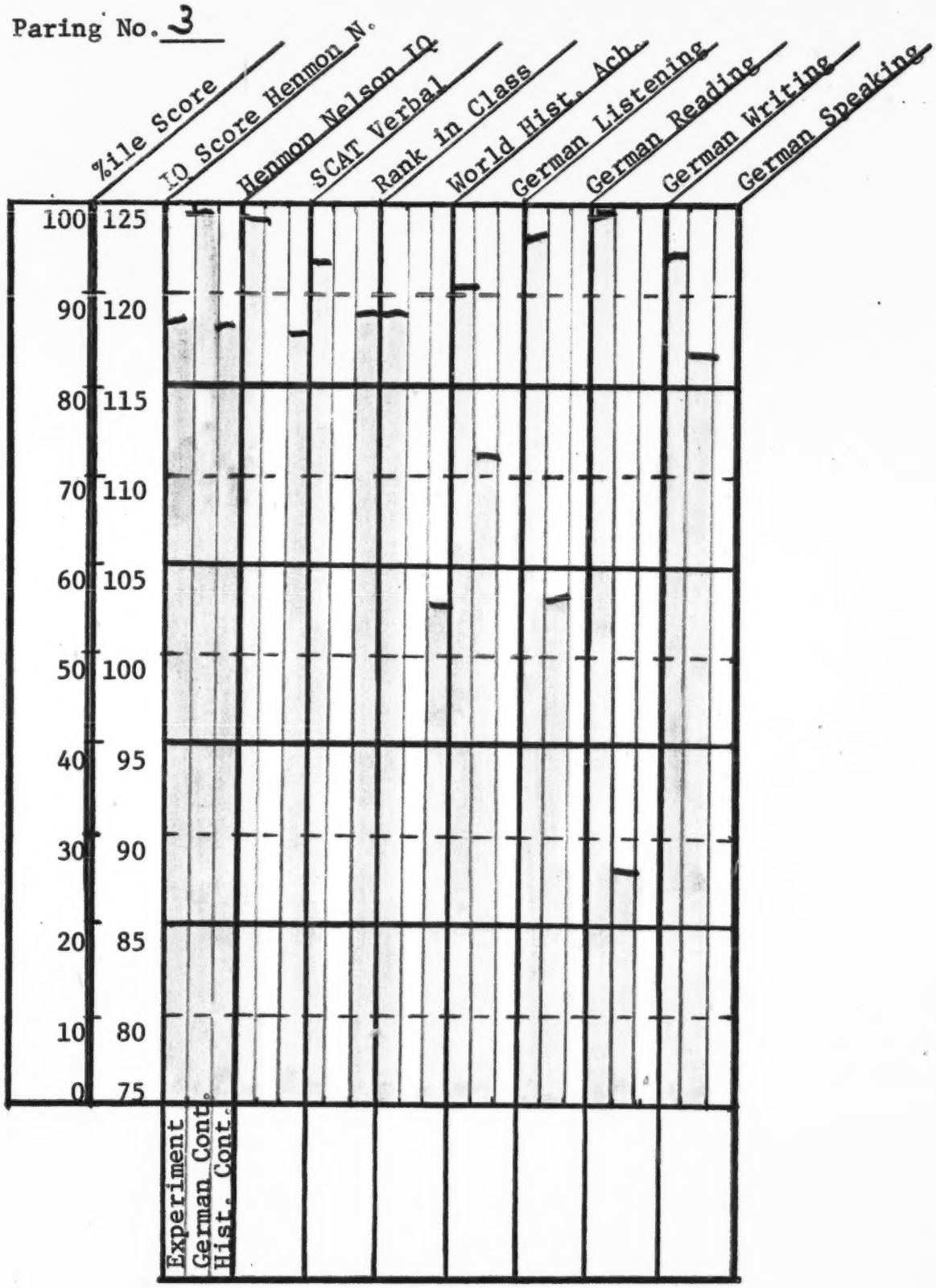

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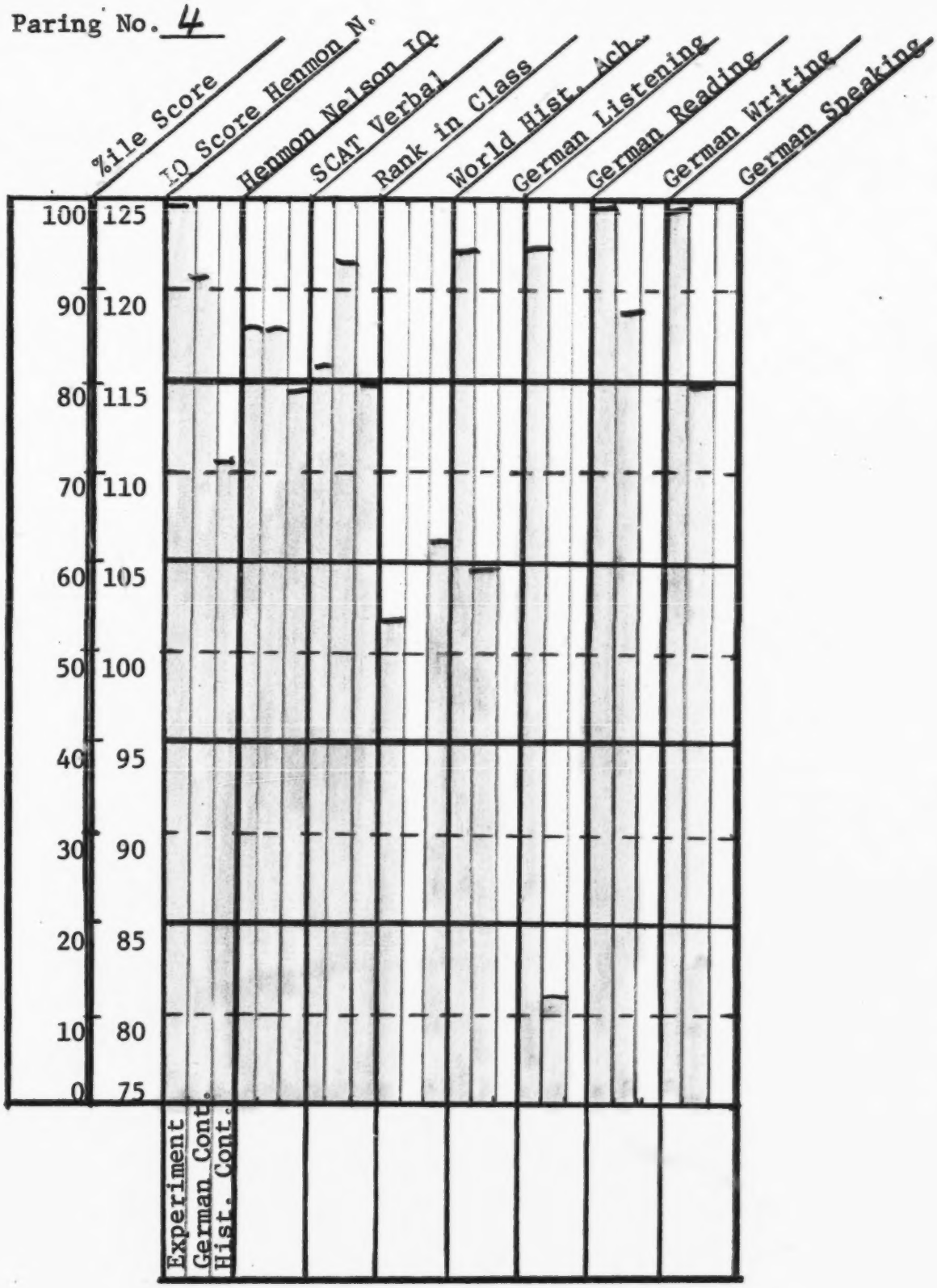

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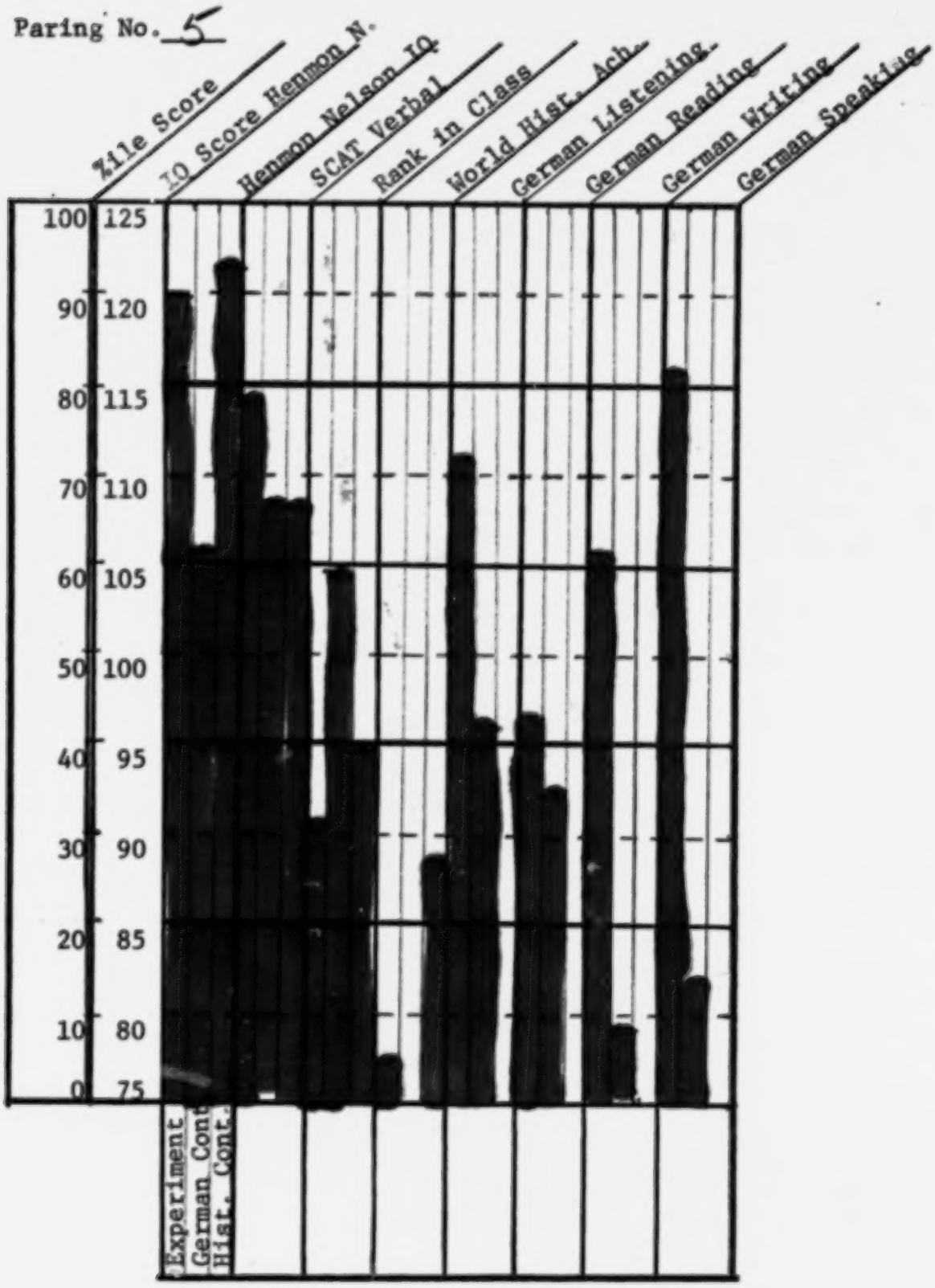

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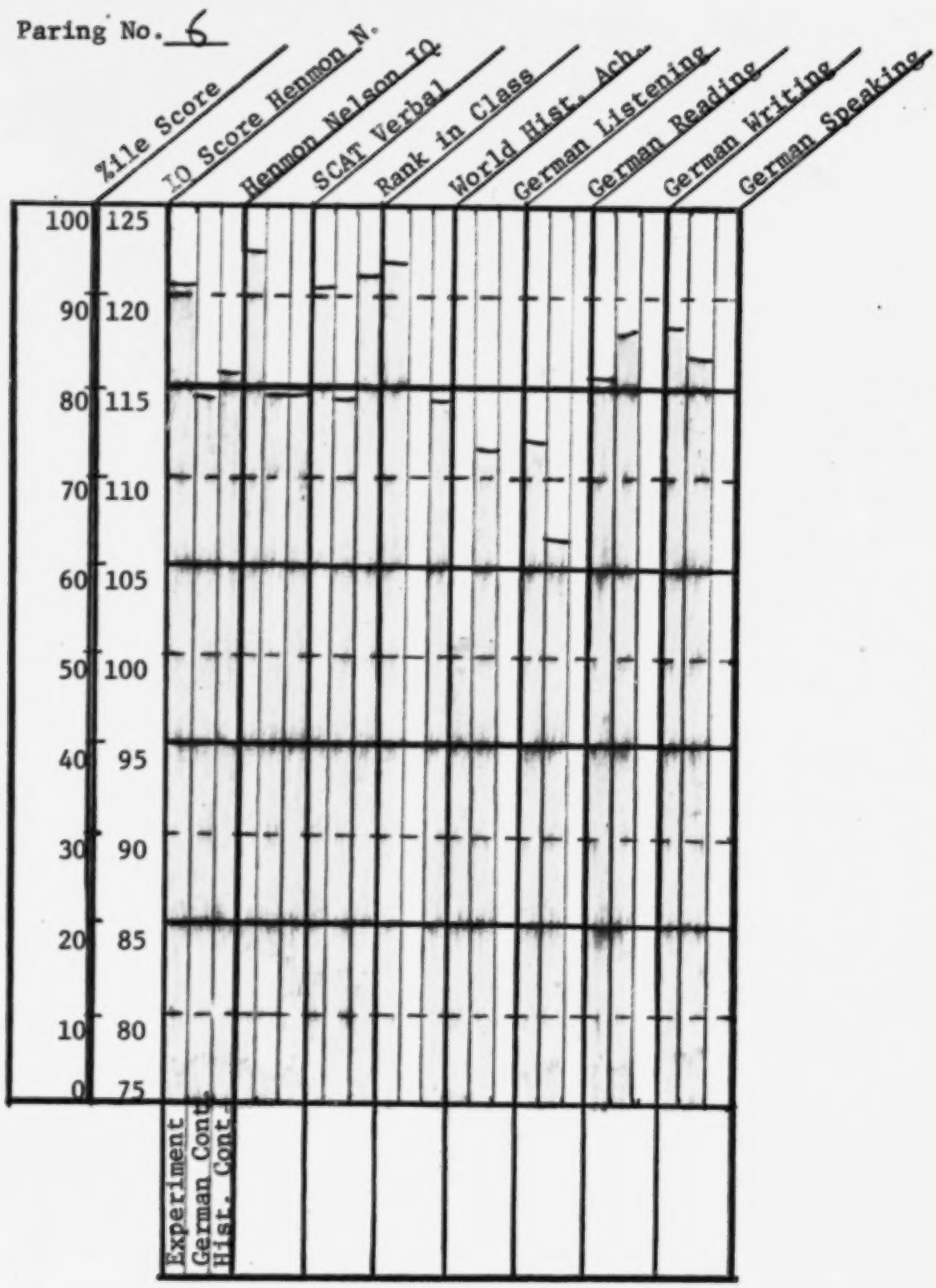

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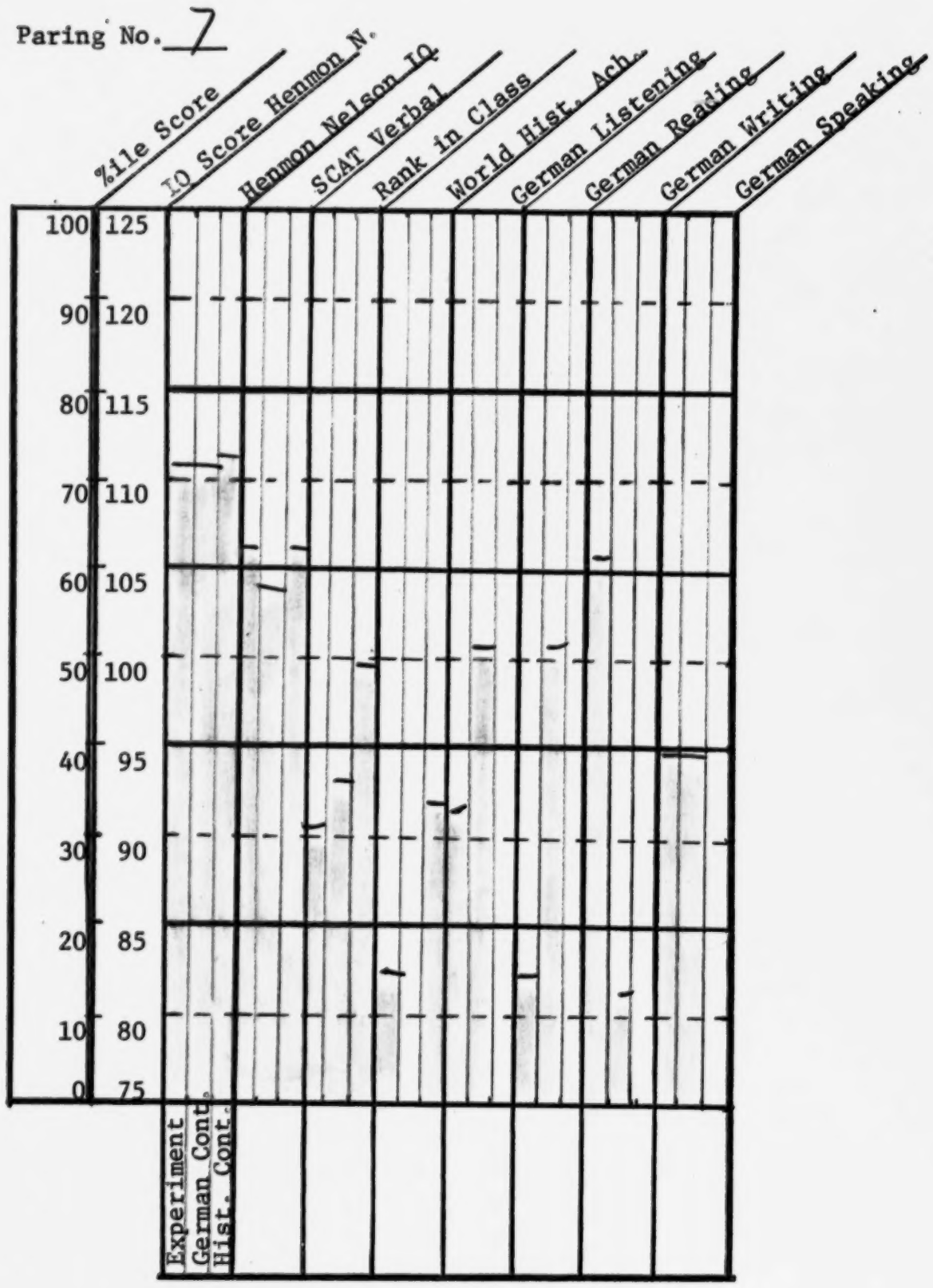

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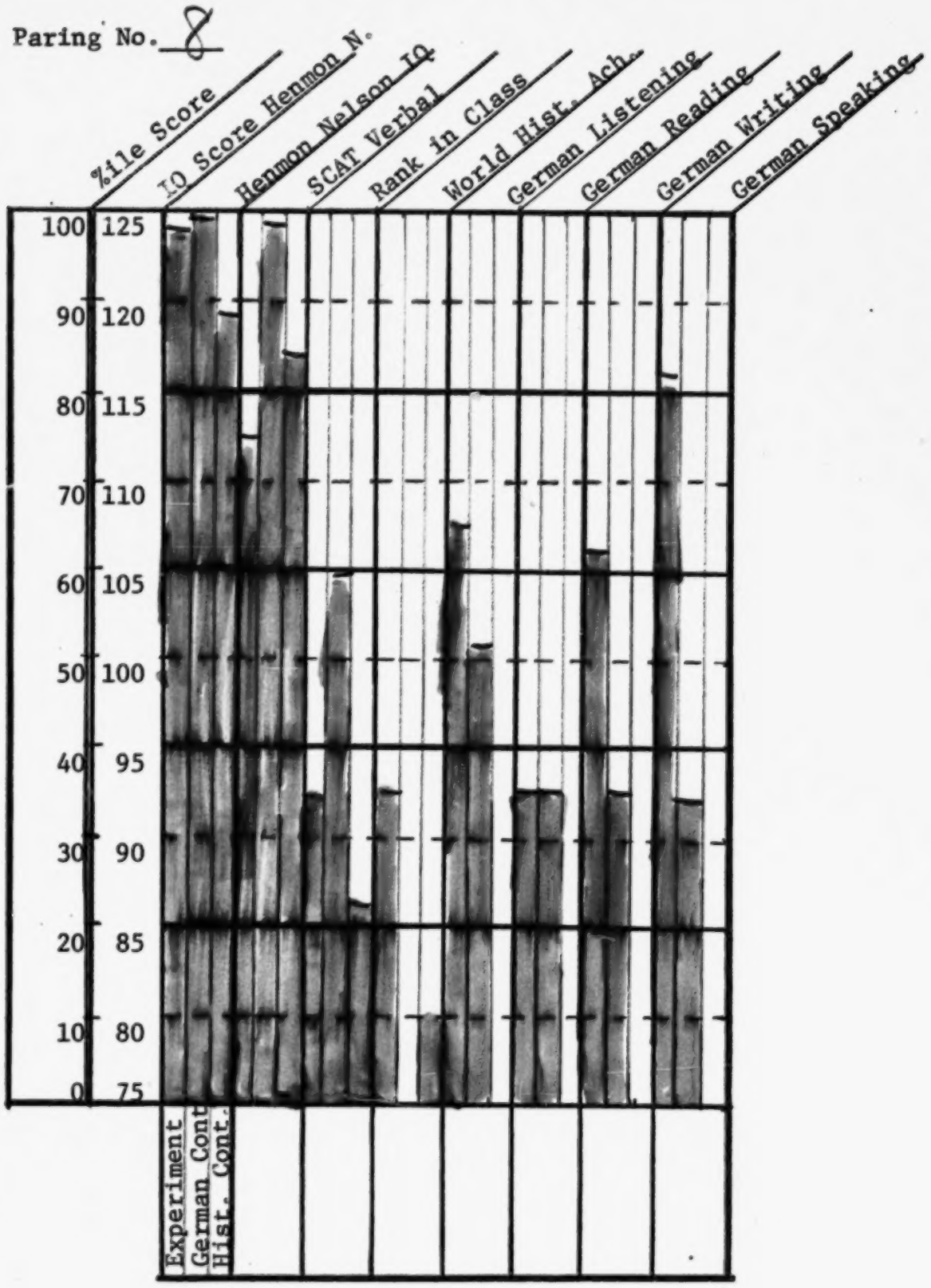

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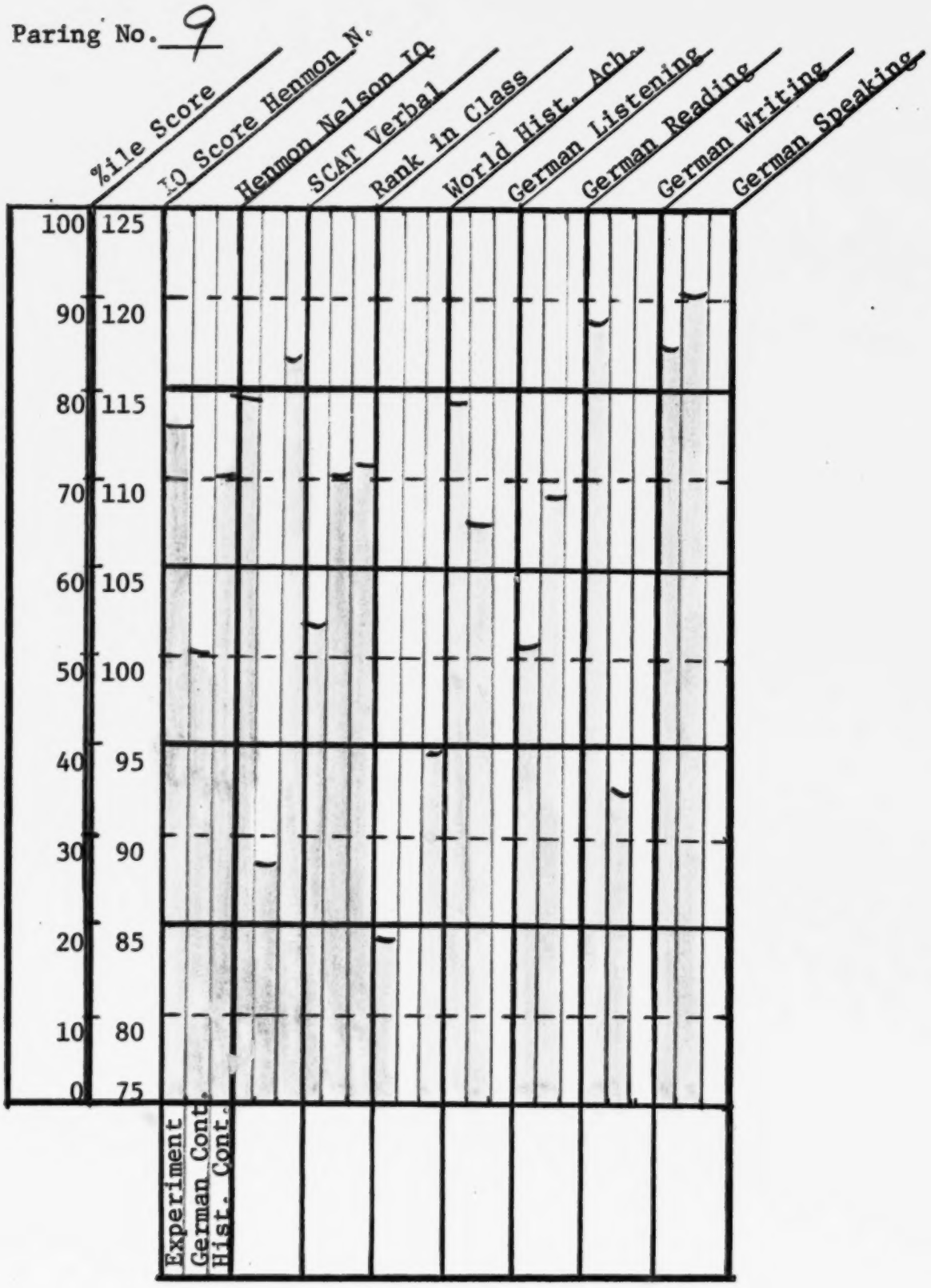

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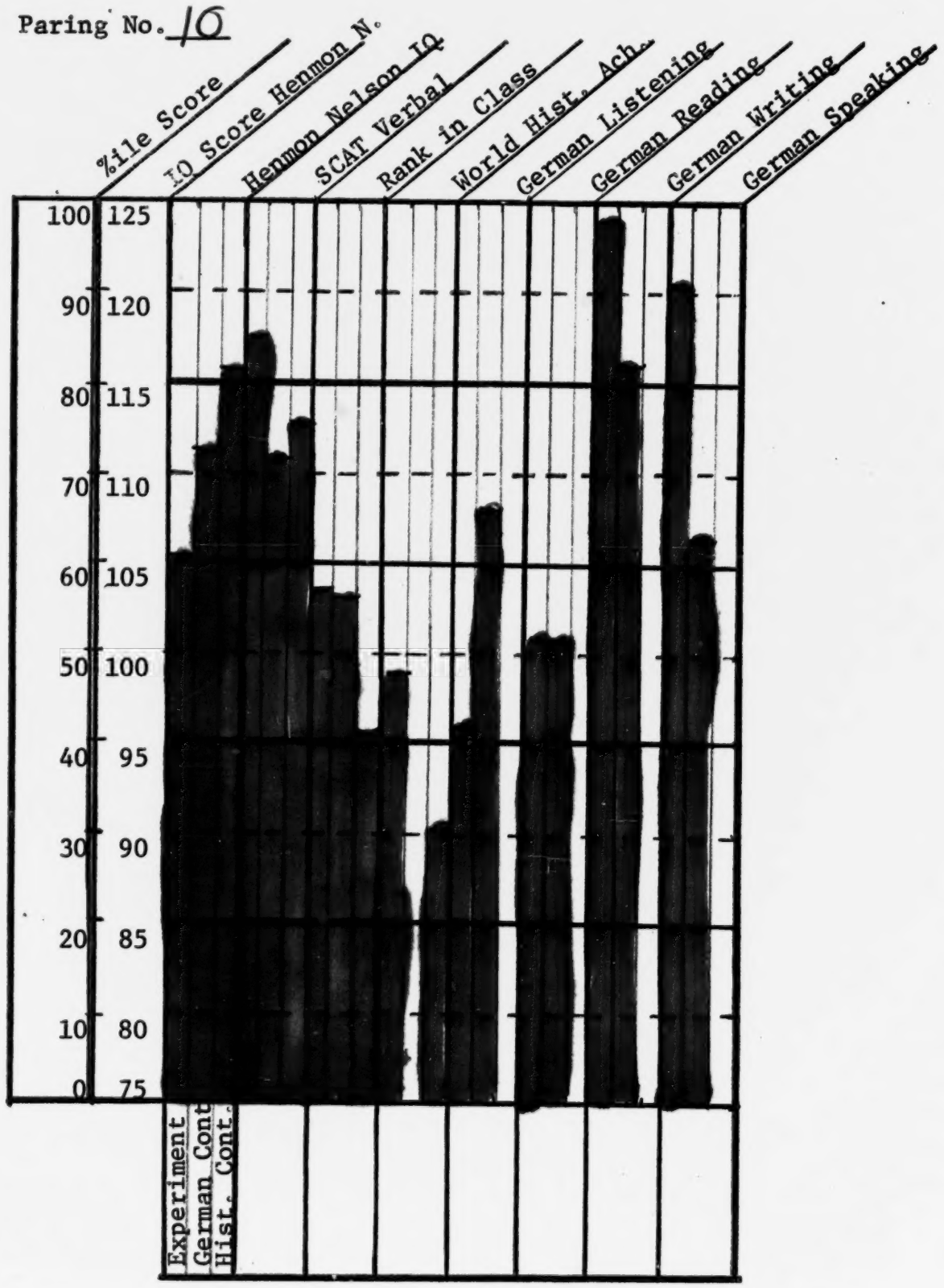

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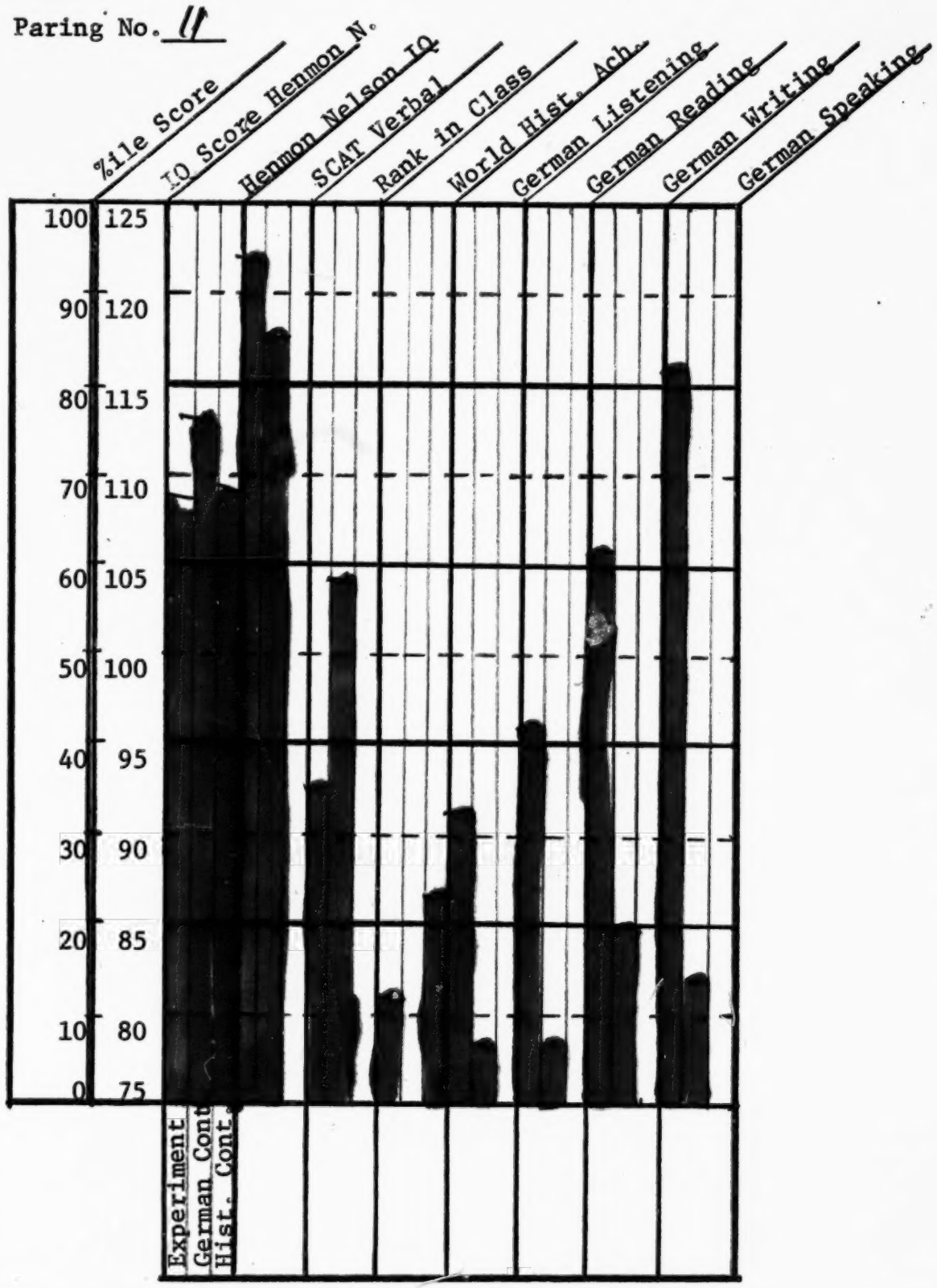

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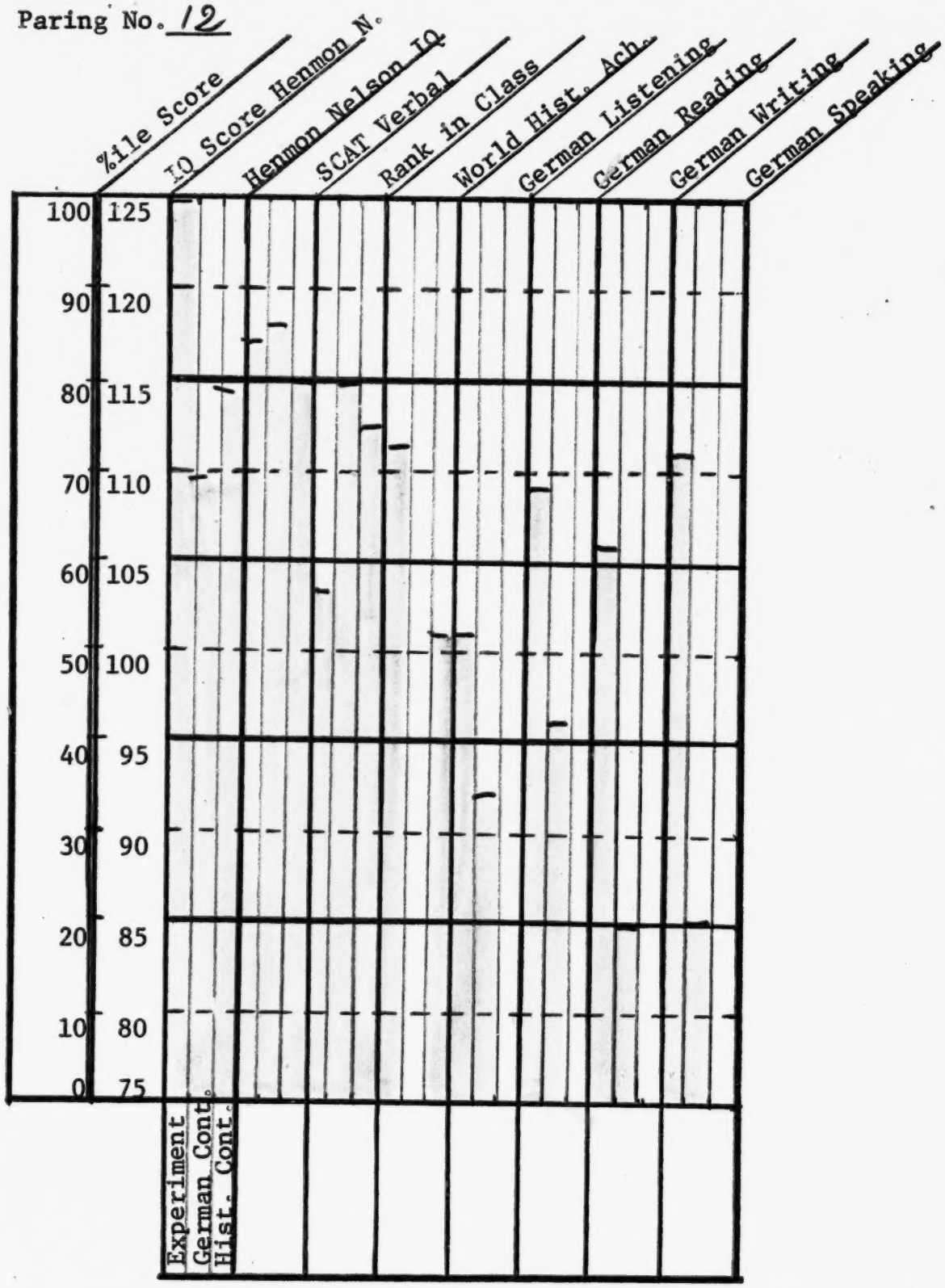
Paring No. 12



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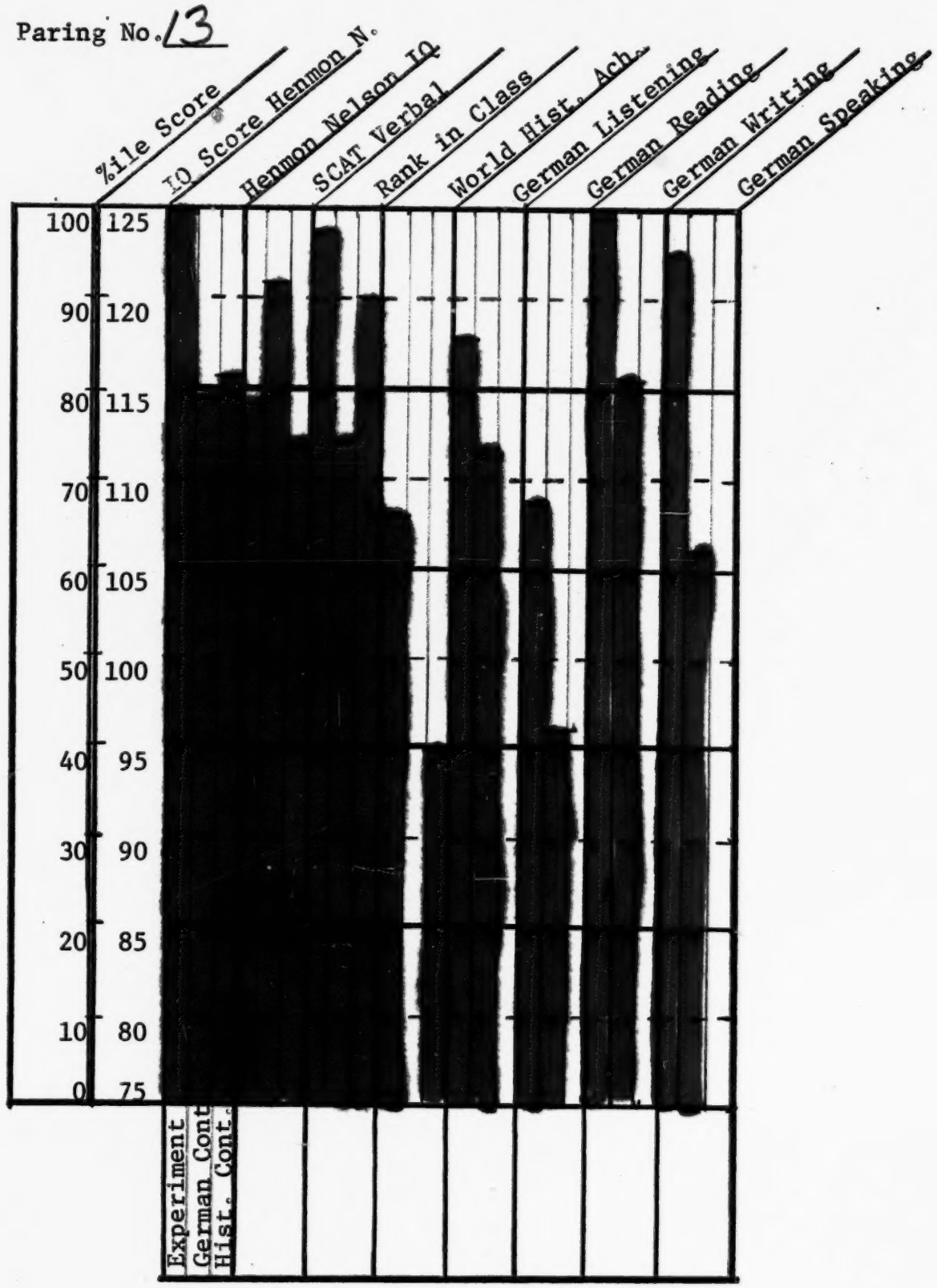

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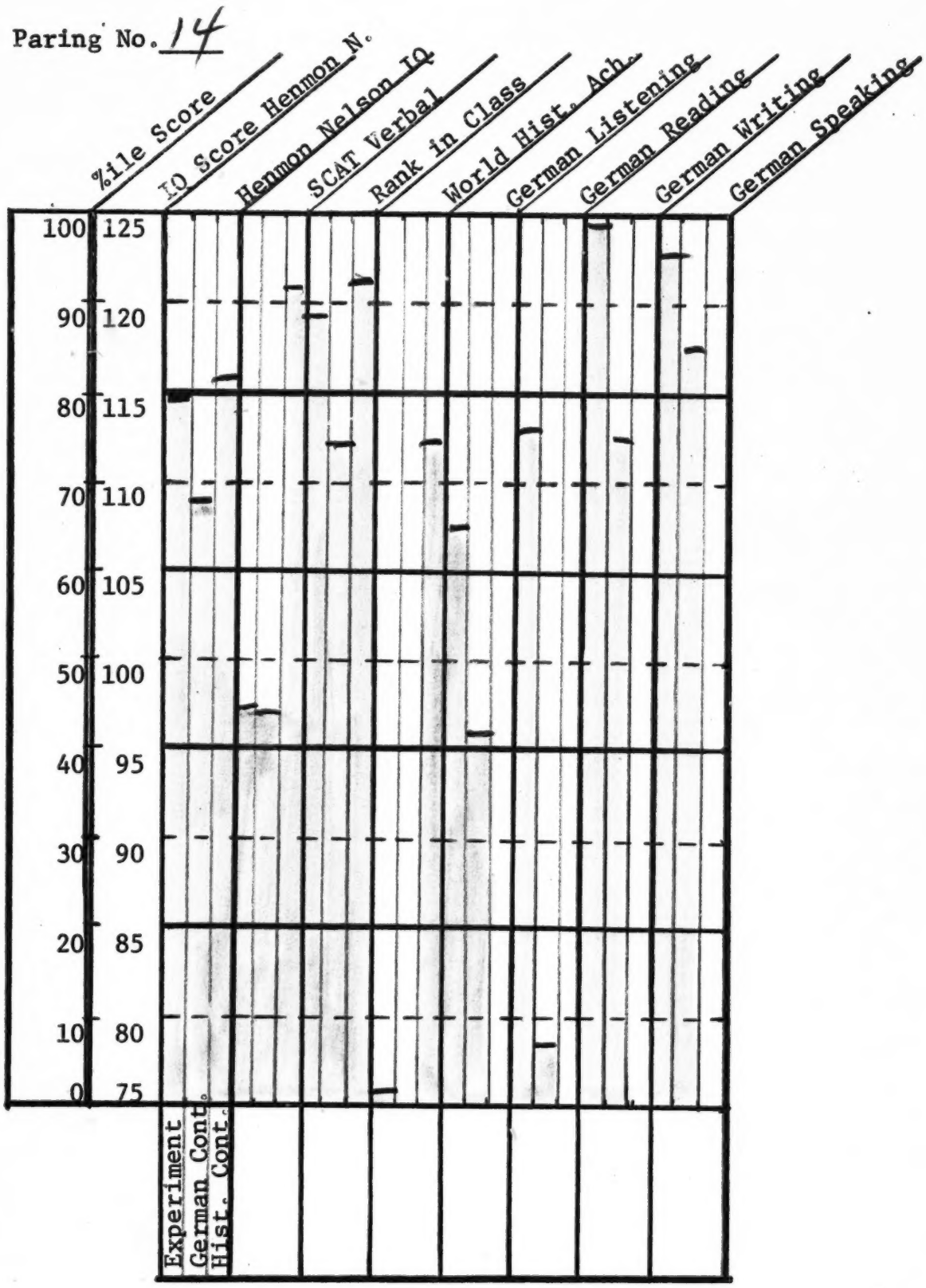

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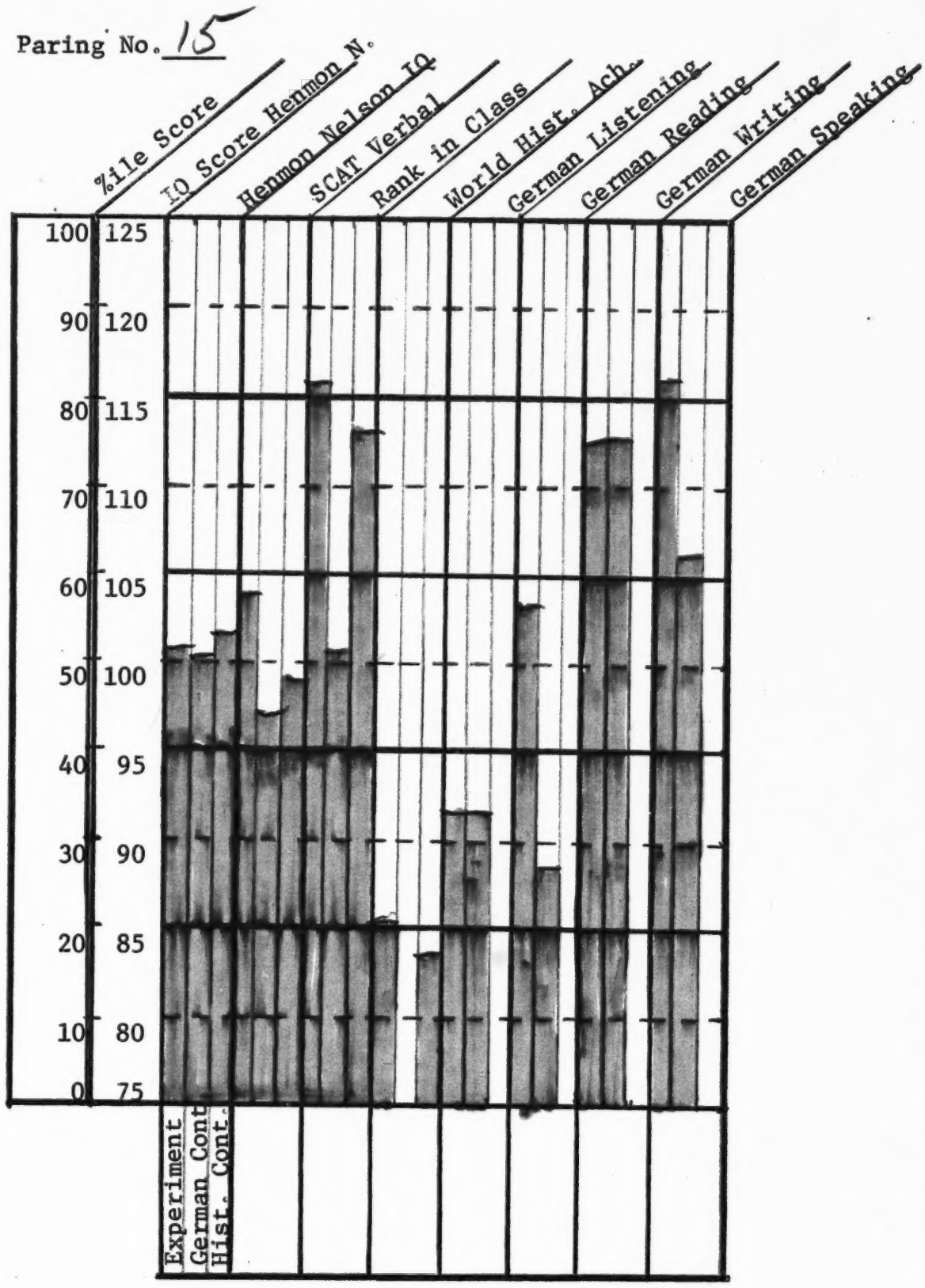

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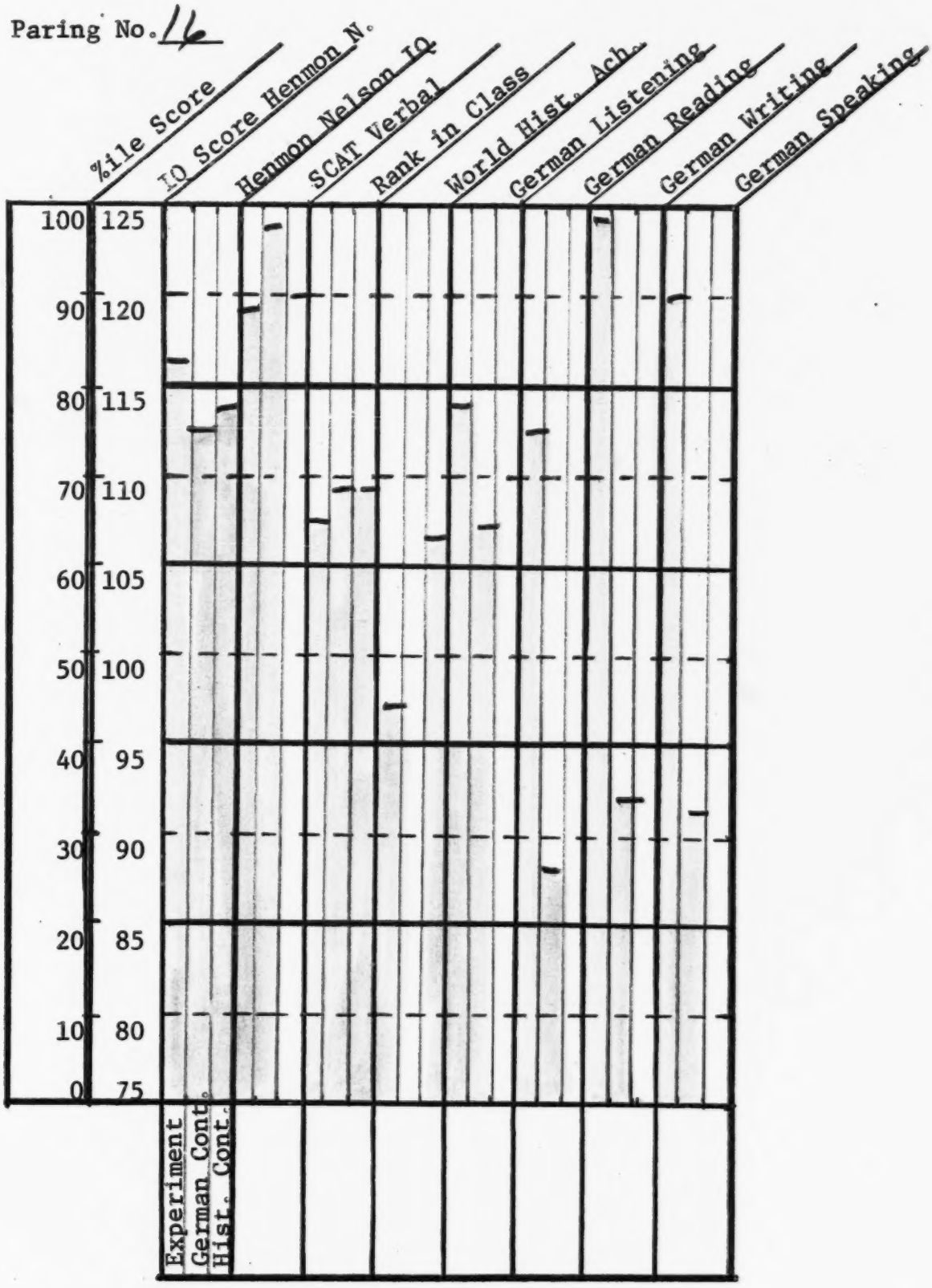

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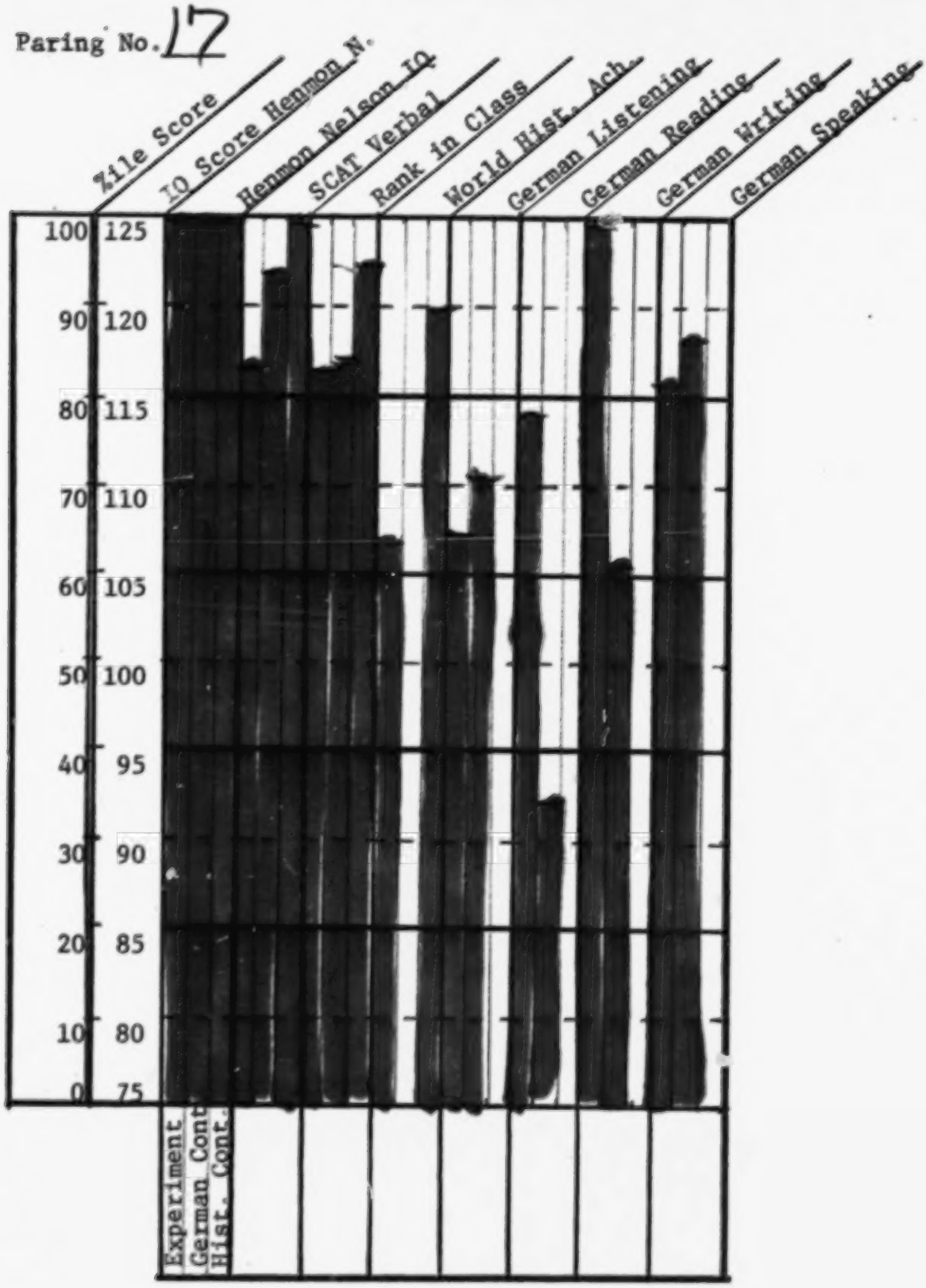

1. Experiment
2. German Control
3. History Control

An analysis of number of paired sets of students who scored higher on the German sub-tests than their control counterparts.

Outscored Control on	And History	But not History
4 of 4 German tests	7	5
3 of 4 German tests	1	0
2 of 4 German tests	1	3
1 of 4 German tests	0	0
0 of 4 German tests	0	0

It should be noted that twelve of the seventeen students involved in the experiment outscored their matched German control of all four sub-tests.

Less than half of these twelve students failed to also outscore their History control counterpart.

Nine of the seventeen experimental students outscored their history control. The five German students who were comparatively less competitive do not appear to be at a particular disadvantage in History.

Since the Experimental Group proved equal to the Control Group in World History achievement and superior to the Control Group in German, the hypothesis is fully supported.

SAMPLE OF CLASS REACTIONS TO EXPERIMENT

The Survey of Class Perception yielded a mass of data too formidable to analyze with any meaning. It would be necessary to employ a computer to run an item analysis and search for significance among the items. Construction of survey was not such that any comparison of total response is possible.

It was hoped that the survey might gain an indication of group identification which would be an indication of motivation.

As a sample of the responses the following items were selected and the percent of students responding positively and negatively is indicated.

No. 9 Because I felt this class something special, I was willing to work harder.

The percent of students agreeing or disagreeing with the statement is indicated.

	Agree	Disagree
German Cont.	41.6	25.0
German Ex.	33.3	27.7
History Ex.	60.0	6.6
History Cont.	16.6	33.3
Soph. in General	28.3	40.0

It is interesting to note that on this item the same group of students (German and History Experimental groups) viewed the uniqueness of the classes and their commitment to work harder in very different ways. Also the History control was considerably more casual toward the program.

No. 19 I feel that I was a contributing member of the class group.

	Agree	Disagree
German Cont.	62.5	20.8
German Ex.	55.5	27.7
History Ex.	53.3	26.6
History Cont.	22.2	55.5
Soph. in General	41.4	31.0

Note that on this item the same students respond similarly. Also note that the German Control experiences the greatest group identification and the History control the least identification. No explanation of cause and effect is offered.

No. 23 I look forward to this class more than any other I have taken.

	Agree	Disagree
German Cont.	50.0	29.8
German Exp.	44.4	27.7
History Exp.	33.3	53.3
History Cont.	11.1	61.1
Soph. in General	24.0	63.7

The History control group was the least positive and most negative in its response to this item. The German Control was the most positive in its outlook toward the program.

No. 27 I feel a loyalty toward this class that is different than toward any other class I have ever been in.

	Agree	Disagree
German Cont.	54.1	25.0
German Exp.	44.4	5.5
History Exp.	46.6	13.3
History Cont.	22.2	55.5
Soph. in General	15.2	44.0

The History Control group is half as apt to respond positively and twice as apt to respond negatively to this item.

No. 42 I have developed more close friends in this class than any other I have been in.

	Agree	Disagree
German Cont.	41.6	25.0
German Exp.	50.0	27.7
History Exp.	53.3	20.0
History Cont.	22.2	55.5
Soph in General	6.4	50.0

It is doubtful that any significance can be attached to differences between the German Control and the experimental group.

No. 50 I have a great deal of respect for other members of the class.

	Agree	Disagree
German Cont.	45.8	29.1
German Exp.	66.6	22.2
History Exp.	53.3	13.3
History Cont.	33.3	27.7
Soph. in General	58.3	10.0

Members of the experiment are most apt to respond positively and least apt to respond negatively to this item. Members of the German experiment are twice as apt to respond positively when compared with the History control.

No. 33 I had to give up many previously held ideas as a result of participation in this class.

Most teachers who visualize themselves as molding a "thinking" mind for a "free democratic society" would give their eye teeth and half a years salary for a positive response to this item.

	Agree	Disagree
German Cont.	33.3	54.1
German Exp.	5.5	66.6
History Exp.	26.6	40.0
History Cont.	33.3	44.4
Soph. in General	26.6	36.6

In a veil of tears we see that they are more apt to say that few roots have been shaken and we must measure our success in minute quantities.

In summary however, if motivation is a factor associated with group identification we would have to conclude that the History control group was probably less motivated than the German Control or Experimental groups. By a similar token, the German Control evidenced slightly more "group spirit" on 4 of the 6 selected statements and may have set a very regorour pace in that area.

OE 6-10-178 5-8023 (S-393) Board of Education, Common School District
Title: An Exploratory Study in Teaching World History in German
Joint No. 16, Sussex, Wisc.

SUMMARY

Project OE-6-10-178 "A controlled experiment to determine the extent to which the coordinate study of German and World History can be effective in the more rapid mastery of German." Three groups of students had been selected, one for experimental purposes and two for control purposes.

The experimental group received two hours of instructions daily - one hour devoted to the experimental world history course taught in German and the second hour devoted to the regular German II course.

The first control group was enrolled in second year German and served as the control in language competency, against which the achievement in German of the experimental group was measured.

The second control group pursued the traditional world history course and served as the control in history against which the achievement in history of the experimental group was measured.

The results were established under the conditions set forth above: The experimental group gained in language competency over the first control group and the experimental group did not manifest any appreciable loss of knowledge of historical influence in relation to the second control group.

					Significant
SCAT Verb Experimental	284	7,937	1,079	---	---
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Thus, learning of German by the experimental group surpassed the control group to the .01 level of significance in three out of four language skills.